

What is claimed is:

Sub. a1
1. A system, comprising:

a base station capable of providing a forward channel signal; and
a remote station capable of monitoring for said forward channel signal,
5 monitoring a reverse channel during a clear channel assessment interval, and providing a
reverse channel signal when said reverse channel is clear.

2. The system of claim 1, wherein said base station is capable of receiving
information encoded on said reverse channel and wherein said remote station is capable of
receiving information encoded on said forward channel.

10 3. The system of claim 1, wherein said forward channel signal and said
reverse channel signal include data packets.

4. The system of claim 3, wherein said data packets include digitized voice
and data.

5. The system of claim 1, wherein said forward channel includes an address.

Sub. a2
15 6. The system of claim 5, wherein said remote station is assigned a unique
remote station address and wherein said remote station is capable of accepting
information encoded on said forward channel when said address of said forward channel
matches said assigned unique remote station address.

7. The system of claim 5, wherein a remote station address is assigned a
20 priori to said remote station.

8. The system of claim 5, wherein said address is a broadcast address.

9. The system of claim 5, wherein said address is a semi-broadcast address.

10. The system of claim 5, wherein said address corresponds with an Internet
Protocol address.

25 11. The system of claim 5, wherein said address is an Internet Protocol
address.

12. The system of claim 5, wherein said remote station is assigned a first remote station address from a first set of addresses and another remote station is assigned a second remote station address from a second set of addresses.

13. The system of claim 12, wherein said first set of address form a first zone and said second set of addresses form a second zone.

14. The system of claim 5, wherein said remote station is assigned a remote station address from a set of addresses and said set of addresses form an Internet sub-network.

15. The system of claim 1, wherein said clear channel assessment interval includes predetermined dwell times and wherein said remote station monitors said clear assessment channel during an assigned dwell time.

16. The system of claim 15, wherein each of said dwell times is of equal duration.

17. The system of claim 15, wherein said remote station is dynamically assigned a dwell time.

18. The system of claim 17, wherein said dwell times are assigned to said remote station and another remote station in a round robin fashion.

19. The system of claim 1, wherein said forward channel signal is provided during a predetermined forward channel interval and said reverse channel signal is provided during a predetermined reverse channel interval.

20. The system of claim 19, further comprising guard times among said forward channel interval, said reverse channel interval, and said clear channel assessment interval.

21. The system of claim 20, wherein said guard times are positioned at the beginning and end of said forward channel interval, said reverse channel interval, and said clear channel assessment interval.

22. The system of claim 20, wherein said guard times are positioned at the beginning and end of said forward channel interval and at the end of said reverse channel interval and said clear channel assessment interval.

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21. The system of claim 1, wherein the system is an Internet Protocol Multiple Access environment.

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22. The system of claim 1, wherein said forward channel signal and said reverse channel signal are wireless signals.

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23. The system of claim 22, wherein said forward channel signal and said reverse channel signal are modulated signals each having carrier signals with a frequency of approximately 2 GHz.

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24. The system of claim 1, wherein said forward channel signal and said reverse channel signal are each electrical signals transmitted in an electrical medium.

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25. The system of claim 1, wherein said forward channel signal and said reverse channel signal are each optical signals transmitted in an optical medium.

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26. The system of claim 1, wherein said forward channel signal and reverse channel signal are half-duplex signals.

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27. The system of claim 1, wherein said forward channel signal and reverse channel signal are full-duplex signals.

Sub. A3 ~~30~~
28. The system of claim 1, wherein said base station is capable of synchronizing with said remote station.

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29. The system of claim 28, wherein said base station uses broadcast control packets for synchronization.

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30. A method for a single-point to a fixed multi-point system having a base station and a plurality of remote stations, the method comprising the step of:

transmitting from the base station a forward channel signal;

monitoring for said forward channel signal at each of the plurality of remote stations; and

25 monitoring a reverse channel at each of the plurality of remote stations, wherein each of the plurality of remote stations monitors at an assigned predetermined time within a clear assessment interval,

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if said reverse channel is clear during an assigned predetermined time associated with one of the plurality of remote stations and said one of the plurality remote stations has information to send the base station, transmitting a reverse channel signal from said one of the plurality of remote stations.

5 ~~33~~ 31. The method of claim 30, wherein said forward channel signal has data information and address information.

10 ~~34~~ 32. The method of claim 31, further comprising the steps of assigning a unique remote station address to each of the plurality of remote stations and accepting said data information at one of the plurality of remote stations when said address matches an unique address of said one of the plurality of remote stations.

~~35~~ 33. The method of claim 32, wherein said step of assigning unique remote address is done a priori.

~~36~~ 34. The method of claim 31, wherein said address information is a broadcast address.

15 ~~31~~ 35. The method of claim 31, wherein said address information is an Internet Protocol address.

20 ~~36~~ 36. The method of claim 31, further comprising the steps of assigning a first remote station address from a first set of addresses to one of the plurality of remote stations and assigning a second remote station address from a second set of addresses to another of the plurality of remote stations.

~~37~~ 37. The method of claim 36, wherein said first set of address form a first zone and said second set of addresses form a second zone.

~~40~~ 38. The method of claim 31, wherein said forward channel signal and said reverse channel signal include data packets.

25 ~~41~~ 39. The method of claim 38, wherein said data packets include digitized voice and data.

~~42~~ 40. The method of claim 30, wherein said predetermined time is a dwell time and said channel assessment interval is partitioned into dwell times.

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41. The method of claim 40, wherein each of said dwell times is of equal duration.

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42. The method of claim 40, further comprising the step of dynamically assigning dwell times to each of the plurality of remote stations.

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43. The method of claim 42, wherein said dwell times are assigned in a round robin fashion.

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44. The method of claim 30, wherein said forward channel signal is provided during a predetermined forward channel interval and said reverse channel signal is provided during a predetermined reverse channel interval.

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45. The method of claim 44, further comprising the step of providing guard times among said forward channel interval, said reverse channel interval, and said clear channel assessment interval.

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46. The method of claim 45, wherein said guard times are positioned at the beginning and end of said forward channel interval, said reverse channel interval, and said clear channel assessment interval.

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47. The method of claim 30, wherein the system is used in an Internet Protocol Multiple Access environment.

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48. The method of claim 30, wherein said forward channel signal and said reverse channel signal are wireless signals.

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49. The method of claim 30, wherein said forward channel signal and reverse channel signal are half-duplex signals.

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50. The method of claim 30, wherein said forward channel signal and reverse channel signal are full-duplex signals.

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51. The method of claim 30, further comprising the step of synchronizing the base station with the plurality of remote stations.

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52. The method of claim 51, wherein broadcast control packets are used for synchronization.

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53. A single-point to a fixed multi-point system, comprising:

base station means for transmitting a forward channel signal; and
remote station means for monitoring for said forward channel signal,
monitoring a reverse channel at an assigned predetermined time within a clear assessment
interval, and transmitting a reverse channel signal wherein said means transmits said
reverse channel signal after detecting that said reverse channel is clear during said
predetermined time.

5. *54* 54. The system of claim 53, wherein said forward channel signal has data
information and address information.

10 *55* 55. The system of claim 54, wherein said remote station means has a unique
remote station address and said remote station means accepts said data information when
said address information matches said unique address.

58 56. The system of claim 54, wherein said remote station means has a first
remote station address from a first set of addresses and a second remote station means has
a second remote station address from a second set of addresses.

15 *57* 57. The system of claim 56, wherein said first set of address form a first zone
and said second set of addresses form a second zone.

60 58. The system of claim 54, wherein said address information is a broadcast
address.

20 *61* 59. The system of claim 54, wherein said forward channel signal and said
reverse channel signal include data packets.

63 60. The system of claim 53, wherein said predetermined time is a dwell time
and said channel assessment interval is partitioned into dwell times.

25 *63* 61. The system of claim 53, wherein said forward channel signal is provided
during a predetermined forward channel interval and said reverse channel signal is
provided during a predetermined reverse channel interval.

64 62. The system of claim 61, further including guard times among said forward
channel interval, said reverse channel interval, and said clear channel assessment interval.

65 63. The system of claim 62, wherein the system is used in an Internet Protocol
Multiple Access environment.

PF/26 64. The system of claim 53, wherein said forward channel signal and said reverse channel signal are wireless signals.

65. The system of claim 53, wherein said forward channel signal and reverse channel signal are full-duplex signals.

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Add B2

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